(MD) of Medical Biochemistry Log Book

" كراســـــة الأنشـــــطة "
اللازمة لحصول المتدرب على درجة الدكتوراة
فى الكيمياء الحيوية الطبية
2022-2023

CONTENTS

**** Aim of the activities book***

To provide one source of evidence for the assessment committee that you attained the desired level of competency required to gain the award.
In this book you will document all clinical, academic and other experiences and skills you attained during your training.

Sections of the book
For each course / rotation

You should fill the following sections:-

1-Biomedical cases log

1- You will first find list with the minimum number of cases you must get exposed to and level of participation you should achieve for each type of cases.
2- You should record all cases in the course and each case should be signed by you trainer.

2- Case presentation log

Record the cases related to the course that you have presented in a seminar of the activity.

3- Procedures log

1- You will find a list for required procedure and level of desired performance you should achieve at the end of training.
2- You will find empty tables to write down the procedure, you level of participation and date and signature of supervisor.

4- Rotation / attendance proof

You should have evidence of achievement the required training hours within each course

For the whole program fill the following sections

1- Academic activities

A- Document all academic activities e.g. lecture, journal clubs, workshops, conference, services attended. This documentation should include the level of participation " attendance, preparation, presentation,……"

2- Academic achievements

A- Document all outcomes you achieved in the field of:-

- Audit participation
- Research "clinical trial" participation.
- Evidence- based medicine "generation of guidelines" protocols

3- Formative assessment log

This document all types of formative assessment attended e.g.:-

- Mini clinical examination
- Quieses

- Program aims

1-Aquire in depth experience of the diagnostic techniques required to become technically competent in practical work, and to master the underlying analytical and clinical principles.

2-Demonstrate the diagnostic skills required for ethical and effective patient care and will demonstrate effective consultation skills with respect to patient care, education and legal opinions. The level of knowledge in all areas will reflect the needs of community or regional laboratories.

3 - Develop a systematic understanding and critical awareness of, and high level of skills in specialist areas of Biochemistry and acquire management skills to lead a department providing an effective service.

4- Enable candidates to start professional careers as consultant in Egypt in Biochemistry but recognized abroad.

5- Acquire high level of training in the communication and teaching skills necessary for effective practice.

6- Acquire life-long habits of reading, literature searches, and consultation with colleagues, attendance at scientific meetings, and the presentation of scientific work that is essential for continuing professional development.

7- Enable to work effectively, in partnership with other health professionals, support staff, patients and service users.

8- To enable candidates to perform high standard scientific medical research and how to proceed with publication in indexed medical journals.

9- To enable candidates to master different research methodology and do their own.

Curriculum Structure:

Duration of program up to 4 years divided into

- Part 1

Program-related basic science courses
-Research methodology
- Medical Statistics
- Medicolegal Aspects and Ethics in Medical Practice and Scientific Research

Students are allowed to set the exams of these courses after 6 months from applying to the M D degree.

- Part 2

  Minimum 2 years

Program –related speciality courses and ILOs
Students are not allowed to set the exams of these courses before 4 years from applying to the MD degree.

- Part 3

Thesis and at least one published research from the thesis

For the M D thesis;

MD thesis subject should be officially registered maximally one and half years from applying to the MD degree,

Discussion and acceptance of the thesis should not be set before 24 months from registering the M D subject and maximally after 4 years;

It could be discussed and accepted either before or after passing the second part of examination

Students have to pass the final written exams to be eligible to set the oral and practical exams.

First Part

Essential Courses

Course	Name of the course
Course 1	Medical statistics.
Course 2	Research methodology
Course 3	Medicolegal Aspects and Ethics in Medical Practice and Scientific Research
Course 4	Basics of medical Biochemistry

Medical statistics

Requirements

- **Credit points: 1 credit point**
- Minimal rate of attendance 80%

Name of the course	Credit points	Responsible department	Attendance	Practical	Percentage of Achieved points
Medical statistics	1 credit point	Pubic Health & Community Medicine			100%
	0.1		Introduction 1 hour	SPSS Introduction 2H	10%
	0.1		Tables and graphics 1 Hour	Data entry and cleaning of data 2H	10%
	0.1		Sampling 1 Hour	Transforming of variables 2H	10%
	0.1		Methodology of data collection 1 Hour	Descriptive statistics 2 H	10%
	0.1		Type of variables 1 Hour	Graphic presentation 2 H	10%
	0.1		Proportion test Chi-square test 1 Hour	Chi square and interpretation of results 2 H	10%
	0.1		Student T test Paired T test 1 Hour	Student, Paired and ANOVA tests 2H	10%
	0.1		ANOVA test 1 Hour	Correlation Regression 2 Hour	10%
	0.1		Non parametric tests 1 Hour	Multiple and logistic Regression 2 H	10%
	0.1		Discrimination analysis factor analysis 1 Hour	Non parametric tests 2 H	10%
			Revision 1 H	Revision 2H	
Student signature			Principle coordinator signature		Head of the department signature

Medical Statistics

Lectures and tutorials

Date	Attendance	Topic	Signature

Research Methodology

Requirements

- **Credit points: 1 credit point**
- Minimal rate of attendance 80%

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Research Methodology	1 credit point	Pubic Health & Community Medicine		100%
	0.15		4 hours Introduction & proposal writing	15%
	0.15		4 hours Epidemiological study designs	15%
	0.15		4 hours Screening & theoretical background	15%
	0.24		6 hours Screening practical	24%
	0.15		4 hours Sample size calculation	15%
	0.08		2 hours Research bias	8%
	0.08		2 hours Ethics in research	8%
	-		2 hours Revision	-
Student signature			**Principle coordinator signature**	**Head of the department signature**

Research Methodology

Lectures and tutorials

Date	Attendance	Topic	Signature

Course 3: Medicolegal Aspects and Ethics in Medical Practice and Scientific Research

Requirements

- **Credit points: 1 credit point**
- Minimal rate of attendance 80%

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Medicolegal Aspects and Ethics in Medical Practice and Scientific Research	1 credit point	Forensic Medicine and Clinical Toxicology	10 hours	100%
	0.5		5 hours Ethics in research	50%
	0.5		5 hours Medical ethics in practice.	50%
Student signature			Principle coordinator signature	Head of the department signature

Medicolegal Aspects and Ethics in Medical Practice and Scientific Lectures and tutorials

Date	Attendance	Topic	Signature

Course 4: Basics of medical Biochemistry (Organ Function)

Requirements

- **Credit points: 7 credit point**
- Minimal rate of attendance 80%

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
biochemistry	1	biochemistry	10 hours Biochemistry of Liver	14.1 %
	0.8		8 hours Biochemistry of adipose tissue.	11.5 %
	0.8		8 hours Biochemistry of Nervous system	11.5 %
	0.8		8 hours Biochemistry of extracellular matrix and Connective Tissue.	11.5 %
	0.8		8 hours Biochemistry of Muscles (Skeletal and cardiac)	11.5 %
	0.8		8 hours Biochemistry of RBCs & WBCs.	11.5 %
	0.5		10 hours Principle of Colorimetry (practical)	7.1 %
	0.5		10 hours Principle of ELISA (practical)	7.1 %
	0.5		10 hours Principle of Electrophoresis (practical)	7.1 %
	0.5		10 hours Principle of Chromatography (practical)	7.1 %
Student signature			Principle coordinator Signature	Head of the department signature

Rotation / attendance proof

الأماكن التى تدرب بها

توقيع مدير المعمل	توقيع رئيس القسم	أسم المعامل التى تدرب بها

A – Biochemical cases log

NO.	Diagnosis of case	Level of participation *	Location	Signature of supervisor

Post graduate teaching
Lectures, tutorial

Date	Title of lecture	Signature of Staff member

Second Part

Year	Didactic points	Training points	Total
Year 1	8	20	24
Year 2	4	21	29
Year 3	4	21	25
Year 4	8	21	29
Total	24	83	107

Unit	Level (Year)	Credit points		
		Didactic	**Training**	**Total**
Unit 1 Clinical Chemistry Unit 1.1: Biochemistry of Diabetes Unit 1.2: CNS biochemistry and diseases Unit 1.3: Biomarkers as Cardiac biomarkers, tumour Markers, Platelet aggregations Biomarkers Unit 1.4: Miscellaneous subjects including: Advanced Glycation, Nanotechnology, Neurotransmitters, Endothelial Dysfunctions, Cytokines and Chemokines, Pollutions, Nutrition Unit 1.5 Case report	**1,2,3,4**	**8**	**28**	**36**
Unit 2 Molecular Biology Unit 2.1 Genetic Basis of Diseases including: Apoptosis, Apoptotic genes, atherosclerosis and LDL modification Unit 2.2 Cancer Biology	**1,2,3,4**	**6**	**28**	**34**
Unit 3: Integrated Metabolism: Including carbohydrate Minerals, protein , Lipid , Enzymes, Vitamins	**1,2,3,4**	**6**	**27**	**33**

Year one

8 Credit points for didactic,
20 Credit points for training
Minimal rate of attendance 80%

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Unit 3 Integrated Metabolism	4	Biochemistry	**40 Hours** • Carbohydrate Metabolism • Lipid Metabolism • Protein Metabolism • Minerals Metabolism • Enzymes chemistry • Vitamins chemistry	100%

Student signature			Principle coordinator Signature	Head of the department signature

Training Year 1

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Training at Biochemistry Laboratories	6	Biochemistry	Attendance of postgraduate training lab at biochemistry department for at least 1 day/week for 30 weeks including the use of departmental protocols for the handling; of specimens including identification, documentation, and measures to prevent specimen mix-ups	30%
	6	Biochemistry	Student teaching Attendance of at least 8 Hours/ week for 18 weeks	30%
	4	Biochemistry	Attendance in ELISA lab for at least 2 days/week for 12 weeks including (96) specimens manipulation , processing, reading and result interpretation	20%
Student signature			**Principle coordinator Signature**	**Head of the department signature**

Year two

4 credit points for didactic, 21 credit points for training
Minimal rate of attendance is 80%
Didactic for year 2 include:

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Unit 1 Clinical Biochemistry	2	biochemistry	10 Hours 1. Platelet aggregations biomarkers 2. Cardiac biomarkers 3. Biochemistry of Diabetes 4. CNS biochemistry and diseases 5. Signal transduction and biochemistry of hormones 6. Miscellaneous topics including: • Advanced Glycation • Neurotransmitters • Endothelial Dysfunctions	50%

Unit 1 **Case report**	2		10 Hours Describe different clinical conditions and diseases related to metabolism	50%
Student signature			Principle coordinator Signature	Head of the department signature

Training Year 2

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Training at Biochemistry Laboratories	6	Biochemistry	Attendance of postgraduate training lab at biochemistry department for at least 1 day/week for 30 weeks including The use of departmental protocols for the handling; of specimens including identification, documentation, and measures to prevent specimen mix-ups	28.6%
	6	Biochemistry	Student teaching Attendance of at least 8 Hours/ week for 18 weeks	28.6%
	4	Biochemistry	Attendance in ELISA lab for at least 2days/week for 12 weeks including specimens manipulation , processing, reading and result interpretation	19%
	1		Formative Assessment	4.8%
Student signature			**Principle coordinator Signature**	**Head of the department signature**

Year three

4 Credit points for didactic,
-20--- credit points for training
Minimal rate of attendance is 80%

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Unit 2 Molecular Biology	2	Biochemistry	20 Hours 1. Molecular biology 2. Genetic Basis of Diseases including: • Apoptosis • Apoptotic genes • Atherosclerosis • LDL modification	50%
Unit 1 Case report			Describe different clinical conditions and diseases related to Genetics	
Student signature			**Principle coordinator Signature**	**Head of the department signature**

Training Year 3

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Training at Biochemistry Laboratories	6	Biochemistry	Attendance of postgraduate training lab at biochemistry department for at least 1 day/week for 30 weeks including The use of departmental protocols for the handling; of specimens including identification, documentation, and measures to prevent specimen mix-ups	28.6%
	6	Biochemistry	Student teaching Attendance of at least 8 Hours/ week for 18 weeks	28.6%
	4	Biochemistry	Attendance of molecular lab for at least 2days/week for 12 weeks including specimens handling , DNA, RNA extraction and analysis	19%
	1		Formative Assessment	4.8%
Student signature			**Principle coordinator Signature**	**Head of the department signature**

Year four

8 Credit points for didactic, 21 credit points for training
Minimal rate of attendance is 80%

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Unit 2 Cancer biology	2	Biochemistry	**20 ours** • Cell-Cycle Control • Oncogenes and Tumor Suppressor Genes	25%
Unit 1 Clinical Biochemistry	2		Miscellaneous topics including: • Nanotechnology • Cytokines and Chemokines • Pollutions • Nutrition	25%
Student signature			**Principle coordinator Signature**	**Head of the department signature**

Training Year 4

Name of the course	Credit points	Responsible department	Attendance	Percentage of Achieved points
Training at Biochemistry Laboratories	6	Biochemistry	Attendance of postgraduate training lab at biochemistry department for at least 1 day/week for 30 weeks including The use of departmental protocols for the handling; of specimens including identification, documentation, and measures to prevent specimen mix-ups	28.6%
	6	Biochemistry	Student teaching Attendance of at least 8 Hours/ week for 18 weeks	28.6%
	4	Biochemistry	Attendance of molecular lab for at least 2days/week for 12 weeks including specimens handling , DNA, RNA extraction and analysis	19%
	4	Biochemistry	Attendance in ELISA lab for at least 2days/week for 12 weeks including specimens manipulation , processing, reading and result interpretation	19%
	1		Formative Assessment	4.8%
Student signature			**Principle coordinator Signature**	**Head of the department signature**

الأماكن التى تدرب بها

أسم المعامل التى تدرب بها	توقيع رئيس القسم	توقيع مدير المعمل

A – Biochemical cases log

NO.	Diagnosis of case	Level of participation *	Location	Signature of supervisor

* Level of participation

A- Plan and carry out

B- Carry out

C- Carry out under supervision

A – Biochemical cases log

NO.	Diagnosis of case	Level of participation *	Location	Signature of supervisor

Level of participation

A- Plan and carry out

B- Carry out

C- Carry out under supervision

A – Biochemical cases log

NO.	Diagnosis of case	Level of participation *	Location	Signature of supervisor

Level of participation

A- Plan and carry out

B- Carry out

C- Carry out under supervision

A – Biochemical cases log

NO.	Diagnosis of case	Level of participation *	Location	Signature of supervisor

Level of participation

A- Plan and carry out

B- Carry out

C- Carry out under supervision

A – Biochemical cases log

NO.	Diagnosis of case	Level of participation *	Location	Signature of supervisor

-

Level of participation

A- Plan and carry out

B- Carry out

C- Carry out under supervision

Post graduate teaching
Lectures, tutorial

Date	Title of lecture	Signature of Staff member

Post graduate teaching
Lectures, tutorial

Date	Title of lecture	Signature of Staff member

Post graduate teaching
Lectures, tutorial

Date	Title of lecture	Signature of Staff member

Post graduate teaching
Lectures, tutorial

Date	Title of lecture	Signature of Staff member

Post graduate teaching
Lectures, tutorial

Date	Title of lecture	Signature of Staff member

Post graduate teaching
Lectures, tutorial

Date	Title of lecture	Signature of Staff member

Postgraduate student's program
Rotation in training assessment

**** Name:***

**** Period of training From:***

To:

**** Site:***

****Rotation***

General skills	could not judge (0)	strongly disagree(1)	(2)	(3)	(4)	(5)	(6)	strongly agree (7)
Demonstrate the competency of continuous evaluation of different types of care provision to patients in the different area of his field.								
Appraise scientific evidence.								
Continuously improve patient care based on constant self-evaluation and life-long learning.								
Participate in clinical audit and research projects.								

General skills	could not judge (0)	strongly disagree(1)	(2)	(3)	(4)	(5)	(6)	strongly agree (7)
Practice skills of evidence-based Medicine (EBM).								
Educate and evaluate students, residents and other health professionals.								
Design logbooks.								
Design clinical guidelines and standard protocols of management.								
Appraise evidence from scientific studies related to the patients' health problems.								
Apply knowledge of study designs and statistical methods to the appraisal of clinical studies.								
Use information technology to manage information, access on-line medical information; for the important topics.								
Master interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals, including:- • Present a case. • Write a consultation note. • Inform patients of a diagnosis and therapeutic plan Completing and maintaining comprehensive. • Timely and legible medical records. • Teamwork skills.								

General skills	could not judge (0)	strongly disagree(1)	(2)	(3)	(4)	(5)	(6)	strongly agree (7)
Create and sustain a therapeutic and ethically sound relationship with patients.								
Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.								
Work effectively with others as a member or leader of a health care team or other professional group.								
Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.								
Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.								
Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.								
Work effectively in health care delivery settings and systems related to specialty including good administrative and time management.								
Practice cost-effective healthcare and resource allocation that does not compromise quality of care.								

General skills	could not judge (0)	strongly disagree(1)	(2)	(3)	(4)	(5)	(6)	strongly agree (7)
Advocate for quality patient care and assist patients in dealing with system complexities.								
Design, monitor and evaluate specification of under and post graduate courses and programs.								
Act as a chair man for scientific meetings including time management								

Elective Course 1

Requirements

- **Credit points:** 1.5 credit point.

- Minimal rate of attendance 80% of lectures and 80% of training

One of these courses

- Advanced medical statistics.
- Evidence based medicine.
- Advanced infection control.
- Quality assurance of medical education.
- Quality assurance of clinical practice.
- -Hospital management

Name of the elective course: ----------

Elective Course Lectures

Date	Attendance	Topic	Signature

Elective Course Practical skills

Date	Attendance	Topic	Signature

Elective Course 2

Requirements

- **Credit points:** 1.5 credit point.

- Minimal rate of attendance 80% of lectures and 80% of training

One of these courses

- Advanced medical statistics.
- Evidence based medicine.
- Advanced infection control.
- Quality assurance of medical education.
- Quality assurance of clinical practice.
- -Hospital management

Name of the elective course: ----------

Elective Course Lectures

Date	Attendance	Topic	Signature

Elective Course Practical skills

Date	Attendance	Topic	Signature

Academic activities
Lecture, Seminars, conference, workshop

Activity	Your role **	Date	Signature of the supervisor

** Your role:-
A- Attendance
B- Organization
C- Presentation

Formative assessment and MCQ

Exam	Score	Grade*	Date	Signature

*Grade:-
A- Excellent
B- Very good
C- Good
D- Pass

الرسائل العلمية

عنوان الرسالة

عربي:

انجليزي:

المشرفون:

1. .....
2. .....
3. .....
4. .....

تاريخ القيد للدرجة: / /

تاريخ تسجيل الموضوع : / /

المتابعة الدورية:

التاريخ	ما تم انجازه	المتبقي	توقيع المشرفين

Declaration

Course Structure Mirror	Responsible (course) Coordinator Name:	Signature	Date
Part I **Course 1** Medical statistics **Course 2** Research methodology **Course 3** Medicolegal Aspects and Ethics in Medical Practice and Scientific Research **Course 4** Biochemistry 1 (Organ Function)			
Part II **Course 5 (speciality course)**			
Elective Course (1) **Certificate Dates:**			
Elective Course (2) **Certificate Dates:**			
- M. D. Thesis Acceptance Date:			
- Fulfillment of required credit points prior to final examination			
Biochemistry M.D. Degree Principle Coordinator:			
Date approved by Medical Biochemistry Department Council:			

يعتمد,
رئيس القسم